

The data below represents surface water samples that were collected on Feb 7, 2014 by EPA sampling teams. Water sample measurement is in micrograms per liter (ug/L) and milligrams per liter (mg/L) for water samples. The data is being compared to EPA ecological risk screening levels (ERSLs) to protect aquatic life in the surface water of the Dan River. Specific qualifiers and footnotes are listed below the summary table. These samples were collected at various locations along the river (refer to map for generalized locations). The detected concentrations in surface water are all below the EPA ERSLs with the exception of lead. EPA typically screens the surface water concentrations using total metals samples, because this is a conservative practice for screening. Because lead was not detected in any of the samples of the dissolved fraction of surface water (i.e., samples that were filtered to remove particulates), there is no threat of toxicity of lead to aquatic organisms. □

Analyte	Ecological Screening Standard for Surface Water Samples ²		Clarksville WTP		Danville WTP		South Boston WTP	
Sample Information								
Sample ID	-		EDEN-		EDEN-		EDEN-SOBOSWTP-	
Date	-		2/7/2014		2/7/2014		2/7/2014	
Time	-		0945		1515		1340	
Status	-		Validated Stage 2A		Validated Stage 2A		Validated Stage 2A	
Type	-		River		River		River	
Water Quality								
Temperature	-		-	-	-	-	-	-
Dissolved Oxygen	6	mg/L	-	-	-	-	-	-
Specific Conductance	-		-	-	-	-	-	-
pH	6.5 - 9.0	std	-	-	-	-	-	-
Turbidity	-		-	-	-	-	-	-
Dissolved metals								
Aluminum	87	µg/L	37.8	µg/L	25U	µg/L	8.9J	µg/L
Antimony	-	-	1.0U	µg/L	1.0U	µg/L	1.0U	µg/L
Arsenic	-	-	1.0U	µg/L	1.0U	µg/L	1.0U	µg/L
Barium	220	µg/L	22.0	µg/L	22.3	µg/L	23.1	µg/L
Beryllium	0.66	µg/L	1.0U	µg/L	1.0U	µg/L	1.0U	µg/L
Boron	360	µg/L	52.6	µg/L	111	µg/L	70.7	µg/L
Cadmium	0.1*	µg/L	1.0U	µg/L	1.0U	µg/L	1.0U	µg/L
Calcium	-*	-	8,880	µg/L	7,190	µg/L	7,210	µg/L
Chromium	25	µg/L	1.0U	µg/L	1.0U	µg/L	1.0U	µg/L
Cobalt	-	-	1.0U	µg/L	1.0U	µg/L	1.0U	µg/L
Copper	3	µg/L	1.3	µg/L	0.67J	µg/L	0.98J	µg/L
Iron	1,000	µg/L	110	µg/L	50U	µg/L	48J	µg/L
Lead	0.59	µg/L	1.0U	µg/L	1.0U	µg/L	1.0U	µg/L
Magnesium	-	-	3,250	µg/L	2,590	µg/L	2,640	µg/L
Manganese	200	µg/L	12.4	µg/L	10.2	µg/L	11	µg/L
Mercury	-	-	0.2U	µg/L	0.2U	µg/L	0.2U	µg/L
Molybdenum	800	µg/L	10U	µg/L	10U	µg/L	10U	µg/L
Nickel	17	µg/L	1.0U	µg/L	1.0U	µg/L	1.0U	µg/L
Potassium	53,000	µg/L	1,930	µg/L	1,580	µg/L	1,640	µg/L
Selenium	5	µg/L	1.0U	µg/L	1.0U	µg/L	1.0U	µg/L
Silica	-	-	12,700	µg/L	15,000	µg/L	16,500	µg/L
Silver	-	-	0.10U	µg/L	0.10U	µg/L	0.10U	µg/L
Sodium	680,000	µg/L	5,550	µg/L	5,460	µg/L	8,520	µg/L
Thallium	0.24	µg/L	1.0U	µg/L	1.0U	µg/L	1.0U	µg/L
Vanadium	27	µg/L	1.0U	µg/L	1.0U	µg/L	1.0U	µg/L
Zinc	39	µg/L	2.6J	µg/L	5.0U	µg/L	2.5J	µg/L
Total Suspended Solids								
Total Suspended Solids	-	-	33.7	mg/L	26.1	mg/L	44.7	mg/L

Analyte	Ecological Screening Standard for Surface Water Samples ²		Clarksville WTP		Danville WTP		South Boston WTP	
Total Metals								
Aluminum	-	-	1,690	µg/L	488	µg/L	862	µg/L
Antimony	5.6	µg/L	1.0U	µg/L	1.0U	µg/L	1.0U	µg/L
Arsenic	10	µg/L	1.0U	µg/L	1.0U	µg/L	0.56J	µg/L
Barium	220	µg/L	34.7	µg/L	30.1	µg/L	29.9	µg/L
Beryllium	0.66	µg/L	1.0U	µg/L	1.0U	µg/L	1.0U	µg/L
Boron	-	-	54.0	µg/L	115	µg/L	71.2	µg/L
Cadmium	2	µg/L	1.0U	µg/L	1.0U	µg/L	1.0U	µg/L
Calcium	-	-	9,120	µg/L	7,290	µg/L	7,150	µg/L
Chromium	29	µg/L	3.2	µg/L	0.79J	µg/L	1.1	µg/L
Cobalt	24	µg/L	1.0U	µg/L	1.0U	µg/L	1.0U	µg/L
Copper	3	µg/L	2.3	µg/L	1.0	µg/L	1.1	µg/L
Iron	-	-	1,740	µg/L	627	µg/L	906	µg/L
Lead	0.6	µg/L	0.76J	µg/L	1.0U	µg/L	1.0U	µg/L
Magnesium	-	-	3,410	µg/L	2,610	µg/L	2,640	µg/L
Manganese	200	µg/L	27.6	µg/L	123	µg/L	17.6	µg/L
Mercury	0.012	µg/L	0.2U	µg/L	0.2U	µg/L	0.2U	µg/L
Molybdenum	-	-	10U	µg/L	10U	µg/L	10U	µg/L
Nickel	17	µg/L	1.4	µg/L	1.0U	µg/L	0.63J	µg/L
Potassium	53,000	µg/L	2,040	µg/L	1,630	µg/L	1,630	µg/L
Selenium	-	-	1.0U	µg/L	1.0U	µg/L	1.0U	µg/L
Silica	-	-	18,000	µg/L	16,400	µg/L	18,900	µg/L
Silver	0.06	µg/L	0.10U	µg/L	0.10U	µg/L	0.10U	µg/L
Sodium	680,000	µg/L	5,890	µg/L	5,600	µg/L	8,430	µg/L
Thallium	0.24	µg/L	1.0U	µg/L	1.0U	µg/L	1.0U	µg/L
Vanadium	27	µg/L	3.5	µg/L	1.4	µg/L	2.1	µg/L
Zinc	39	µg/L	6.1	µg/L	3.9J	µg/L	9.8	µg/L
Anions								
Bromide	-	-	0.10U	mg/L	0.10U	mg/L	0.10U	mg/L
Chloride	230	mg/L	9.0	mg/L	10.2	mg/L	10.9	mg/L
Nitrate Nitrogen ³	0.31	mg/L	-	-	5.6	-	-	-
Nitrite Nitrogen ⁴	-	-	-	-	-	-	-	-
Sulfate	-	-	6.5	mg/L	5.4	mg/L	6.3	mg/L
Orthophosphate	-	-	-	-	-	-	-	-
Nutrients								
Ammonia Nitrogen	-	-	-	-	-	-	-	-
Total Kjeldhal Nitrogen	-	-	-	-	-	-	-	-
Phosphorus	-	-	-	-	-	-	-	-

Notes

- ² Value obtained from the GL Tier 2 Values; National Recommended Water Quality Criteria; Suter and Tsao (1996); Reference condition for EcoRegion XI (25 percentile); NCDNER State Standards for surface water
- ³ Value listed is for Nitrate.
- ⁴ Value listed is for Nitrite.
- ⁵ Only compared to Human Health Screening Values
- R Instrument calibration error; monitoring result rejected
- °C degrees Celsius
- EPA U.S. Environmental Protection Agency
- * The screening values for Cadmium and Calcium in dissolved metals were originally reported incorrectly. The correct screening value for Cadmium is 0.1 µg/L and there is no screening value for Calcium. This table was updated on 2/27/14 to reflect the correction.
- J Value is estimated
- J+ Value is estimated with a possible high bias
- µg/L micrograms per liter
- mg/L milligrams per liter
- mS/cm millisiemens/centimeter
- NTU Nephelometric turbidity units
- std standard
- U Analyte was not detected above the listed reporting limit.